ORIGINAL

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Dynetics, Inc. Request For Modification	)	WT Docket No. 19-39
of Temporary Freeze on Non-Federal	)	
Applications in the 3100-3550 MHz Band	)	

EXPEDITED ACTION REQUESTED

REQUEST FOR MODIFICATION OF FREEZE

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TABLE OF CONTENTS

SUMMARY

To reverse the severe unintended impact of the Freeze with respect to the ongoing deployment of technologically-superior Part 90 Radiolocation Service solutions below 3450 MHz, Dynetics requests that the Commission modify the 3100-3550 MHz Freeze to apply to only the 3450-3550 MHz frequency range and thereby permit the processing and grant of Part 90 Radiolocation Service applications for new and modified facilities below 3450 MHz.

In issuing the Freeze, the policy of the Commission was clear – namely to "maintain a stable spectral environment ***in a band that is under active consideration*** for possible alternative use." In appropriate circumstances, imposing an application freeze on the basis of such rationale serves important policy considerations. In this case, while months ago it was understandable to assume that NTIA's active consideration of alternative use under the MOBILE NOW Act might remain open to the full 3100-3550 MHz frequency range through the March 2020 report deadline, there is no indication at all that NTIA has identified frequencies for alternative use beyond the limited 3450-3550 MHz frequency range ever since NTIA identified this range in February 2018, and similarly there is no indication at all that NTIA is even actively considering the 3100-3450 MHz range for alternative use at this point for inclusion in the report due in March 2020. Assuming this is indeed the status of NTIA's review, then (i) the 3100-3450 MHz range would not in fact be under "active consideration" by NTIA for possible alternative use; (ii) because the scope of the Freeze would be beyond NTIA's current "active consideration" the Freeze would be unnecessarily restrictive; and (iii) the Freeze should be modified to apply only to the 3450-3550 MHz frequency range because such action would not undermine the policy underlying the Freeze in the first place.

The policy of the United States requires federal agencies to support private sector development of technologies/systems capable of providing reliable and effective security, surveillance and deterrence of threats to critical infrastructure. The common requirement for critical infrastructure operators – regardless of sector – is the need to plan, evaluate and deploy their infrastructure protection plans on a long-term basis. These operators must have the unfettered ability to obtain Commission-issued licenses authorizing the operation of state-of-the-art radiolocation technologies for infrastructure surveillance and protection. Decisions regarding radiolocation technologies must be made early on in the process and, once selected, such technologies become essential components of the multi-year planning and deployment process for these critical infrastructure protection systems.

Critical infrastructure operators have for years actively licensed and deployed Commission-licensed radiolocation solutions below 3450 MHz for the purpose of infrastructure surveillance and protection. From a technological perspective, radiolocation solutions within the S band (2-4 GHz) utilize specific propagation and atmospheric conditions unique to this frequency range, which provides superior performance compared to higher frequency bands. Dynetics' GroundAware® system, for example, provides superior functionality in this frequency range. To date, Part 90 Radiolocation Service licenses for GroundAware® products have been issued in over fifty locations. The long-term duration of Part 90 Radiolocation Service licenses (i.e., 10 years) is necessary in order to allow critical infrastructure applicants to realistically commit the resources necessary to implement their critical infrastructure protection plans. Short-term

Special Temporary Authority (STA) does not provide the certainty that is necessary to plan, commit resources, and deploy infrastructure surveillance and protection on a long-term basis.

In addition to licenses that have already been granted, these superior Part 90-licensed solutions within 3100-3450 MHz are being actively pursued for many additional new long-term infrastructure protection deployments. Dynetics is currently engaged with 98 entities across the United States - in nearly every one of the 16 DHS sectors - who are either in their early (i.e., corporate planning/tech evaluation) or middle (i.e., capital planning/deployment) stages of their infrastructure protection roll-outs. These critical infrastructure operators are in many cases relying on the ability to promptly obtain long-term Part 90 Radiolocation Service licenses within 3100-3450 MHz once they have reached the appropriate phases of their infrastructure protection programs. These critical infrastructure operators are planning to license Part 90 Radiolocation Service products below 3450 MHz for over 250 site locations.

The Freeze immediately thrusted into chaos the long-term licensing and infrastructure protection plans of those critical infrastructure operators who plan to achieve successful infrastructure protection by obtaining authorization for Part 90 Radiolocation Service operations within 3100-3450 MHz. Non-compliance with express regulatory milestones and infrastructure protection deadlines can result in significant enforcement action. More importantly, the inability to readily incorporate licensed Part 90 radiolocation technologies in the lower portion of the 3 GHz band simply places the physical and economic security of the nation at increased risk.

Although these impacts are all certainly unintended, unique and unusual consequences of the Freeze, they are nonetheless very severe and continuing to impose the Freeze in the face of such consequences is plainly contrary to the public interest. Long-term protection of critical infrastructure operations is not optional, nor is it subject to postponement, delay or "alternatives." These licensed systems are essential components of the complex long-term planning process. The potential consequences, therefore, of maintaining the current scope of the Freeze are well beyond "unduly burdensome." Rather, the consequences could be devastating and involve danger to property, human life, and homeland security. The Freeze has placed critical infrastructure operators, and the security of our nation's critical infrastructure, at greater risk with no reasonable alternatives. For these reasons, and because the requested modification would not undermine the policy underlying the Freeze, Dynetics seeks expedited modification of the Freeze as requested herein.

In the alternative Dynetics requests that the Freeze be lifted to permit applications to be filed exclusively within the more limited range of 3100-3300 MHz by critical infrastructure operators for the purpose of infrastructure surveillance and protection, with such applications restricted to the parameters specified in Dynetics' simultaneously-filed Request for Limited Waiver.

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REQUEST FOR MODIFICATION OF FREEZE

Dynetics, Inc. ("Dynetics"), by its attorneys and pursuant to Section 1.4 of Commission's Rules,[1] in order to mitigate the risk of increased attack on the nation's critical infrastructure facilities, hereby requests expedited grant of a modification of the Commission's freeze ("Freeze") on the acceptance and processing of applications for new or expanded Part 90 Radiolocation Service operations in the 3100-3550 MHz frequency band.[2]

As set forth herein, to reverse the severe unintended impact of the Freeze with respect to the ongoing deployment of technologically-superior Part 90 Radiolocation Service solutions below 3450 MHz, Dynetics requests that the Commission modify the Freeze to apply to only the 3450-3550 MHz frequency range and thereby permit the processing and grant of Part 90 Radiolocation Service applications for new and modified facilities below 3450 MHz. [3]

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[1] 47 C.F.R. § 1.4.

[2] *Temporary Freeze on Non-Federal Applications in the 3100-3550 MHz Band*, WT Docket No. 19-39 (DA 19-105), rel. February 22, 2019 ("Freeze Notice").

[3] As explained at Section III, Dynetics requests that the Commission modify the Freeze to apply only to the 3450-3550 MHz frequency range in the event that NTIA's current active review with respect to possible alternative use pursuant to the MOBILE NOW Act in fact does not apply to the 3100-3450 MHz range. While such action is justified and would not undermine the policies specified in the Freeze Notice, Dynetics recognizes that in certain cases a limited lifting of an application Freeze to permit a specific category of applications may also be appropriate. Accordingly, in the alternative Dynetics requests that the Freeze be lifted to permit applications to be filed exclusively within 3100-3300 MHz by critical infrastructure operators for the purpose of infrastructure surveillance and protection, with such applications restricted to the parameters specified in Dynetics' simultaneously-filed

I. If The Scope Of NTIA's Current Review For Alternative Use Does Not Include 3100-3450 MHz, Then The Freeze Unnecessarily Restricts Part 90 Radiolocation Applications for New and Modified Facilities in that Band

In issuing the Freeze, the policy of the Commission was clear – namely to "maintain a stable spectral environment ***in a band that is under active consideration*** for possible alternative use."[4] In appropriate circumstances, imposing an application freeze on the basis of such rationale serves important policy considerations. However, application freezes often can and do have significant collateral impacts on legitimate existing and future users of the affected spectrum and for that reason any spectrum freeze must not be overbroad or impose unnecessary regulatory burden. In this case, while months ago it was understandable to assume that NTIA's active consideration of alternative use under the MOBILE NOW Act might remain open to the full 3100-3550 MHz frequency range through the March 2020 report deadline, there is no indication at all that NTIA has identified frequencies for alternative use beyond the limited 3450-3550 MHz frequency range ever since NTIA identified this range in February 2018, and similarly there is no indication at all that NTIA is even actively considering the 3100-3450 MHz range for alternative use at this point for inclusion in the report due in March 2020. Assuming this is indeed the status of NTIA's review, then (i) the 3100-3450 MHz range would not in fact be under "active consideration" by NTIA for possible alternative use; (ii) because the scope of the Freeze would be beyond NTIA's current "active consideration" the Freeze would be unnecessarily restrictive; and (iii) the Freeze should be modified to apply only to the 3450-3550 MHz frequency range because such action would not undermine the policy underlying the Freeze in the first place.

Request For Limited Waiver. In a separate filing submitted pursuant to 47 C.F.R. §§ 1.3 and 1.925, Dynetics is also submitting a "Request For Limited Waiver", in which Dynetics asks that the Commission grant a limited waiver of the Freeze to permit the filing, processing and grant of Part 90 Radiolocation Service applications for new and modified facilities within 3100-3300 MHz for the purpose of infrastructure surveillance and protection, pursuant to narrowly-tailored terms and conditions.

[4] Freeze Notice at 2 (emphasis added).

II. Modification Of the Freeze To Permit Long-Term Part 90 Radiolocation Service Licensing Below 3450 MHz Would Not Promote Speculative Applications, Rather It Would Ensure Reliable Long-Term Protection of Critical Infrastructure Operations Consistent With United States Homeland Security Policy

In the past, the Commission has taken narrowly-tailored action to modify/lift application freezes in order to address the "unique" nature of affected users, to limit the "potential to harm" specific services, and to avoid "competitive imbalance" among licensed systems.[5] Such action is appropriate when it also "prevents attempts to warehouse spectrum" on a speculative basis.[6] As demonstrated below, lifting the Freeze to permit long-term Part 90 Radiolocation Service licensing below 3450 MHz supports public interest considerations well beyond the protection of "mature and highly competitive industr[ies]".[7] Rather, such action – particularly as such action would apply within 3100-3300 MHz – ensures that a very specific category of users – critical infrastructure operators – are permitted to continue implementing their long-term infrastructure protection plans in furtherance of United States homeland security policy. As further addressed herein, because the need for such long-term licensing is established, ongoing and non-discretionary, the applications filed by critical infrastructure operators for the purpose of infrastructure surveillance and protection pursuant to such a modification of the Freeze would not fall under the category of "speculative applications"[8] the Commission sought to prevent by imposing the Freeze.

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[5] See, e.g., *Future Development of Paging Systems,* First Report and Order, WT Docket No. 96-18, PP Docket No. 93-253, FCC 96-183, ¶¶18-25 (1996) (recognizing that a partial lifting of the freeze is appropriate where "even a short-term freeze has the potential to harm the paging industry" which is "unique in that has nationwide as well as regional and local licensees" and that the Commission "must ensure that [its] interim rules do not create a competitive imbalance....during the pendency of the rulemaking."

[6] Id. at ¶25.

[7] Id. at ¶23.

[8] Freeze Notice at 3.

A. United States Homeland Security Policy Demands Reliable Long-Term Protection Of Critical Infrastructure Operations Including The Deployment Of Commission-Licensed Part 90 Radiolocation Technology Where Appropriate

Well before the September 11 attacks, it had "long been the policy of the United States to assure the continuity and viability of critical infrastructures" such as "telecommunications, energy, banking and finance, transportation, water systems and emergency services, both governmental and private."[9]

Post 9-11, it became painfully evident that "there is critical infrastructure so vital that its incapacitation, exploitation, or destruction, through terrorist attack, could have a debilitating effect on security and economic well-being."[10] More pointedly, such reinvigorated policy now requires the federal government to "work with critical infrastructure owners and operators" to "take proactive steps to manage risk and strengthen the security and resilience of the Nation's critical infrastructure".[11] Thus, a lynchpin to the successful implementation of this policy is federal agency support of private sector development of technologies and systems capable of providing reliable and effective security, surveillance and deterrence of threats to critical infrastructure, as repeatedly confirmed in these directives:

> "...strategic ***improvements in security*** can make it more difficult for attacks to succeed and can lessen the impact of attacks that may occur."[12]
>
> "Federal departments and agencies will identify, prioritize, and ***coordinate the protection of critical infrastructure and key resources in order to prevent, deter, and mitigate the effects*** of deliberate efforts to destroy, incapacitate, or exploit them."[13]

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[9] Presidential Decision Directive/NSC-63, PDD-63, Sections I and II (May 22, 1998) (accessed at https://fas.org/irp/offdocs/pdd/pdd-63.htm).

[10] Homeland Security Presidential Directive/Hspd-7, "December 17, 2003, Section 4 ("HSPD-7") (accessed at: https://www.dhs.gov/homeland-security-presidential-directive-7).

[11] Presidential Policy Directive – PPD-21 -- Critical Infrastructure Security and Resilience, February 12, 2013, P.2 ("PPD-21") (accessed at https://www.dhs.gov/sites/default/files/publications/PPD-21-Critical-Infrastructure-and-Resilience-508.pdf).

[12] HSPD-7 at Section 5 (emphasis added).

[13] Id. at Section 8 (emphasis added).

> "These efforts shall seek to reduce vulnerabilities, minimize consequences, ***identify and disrupt threats***..."[14]
>
> "The national effort to strengthen critical infrastructure security and resilience depends on ***the ability of public and private sector critical infrastructure owners and operators to make risk-informed decisions on the most effective solutions available*** when allocating limited resources in both steady-state and crisis operations. Therefore, ***risk management is the cornerstone of the National Plan***..."[15]
>
> The activities of the public/private partnership must include "[i]mplement[ing] ***intrusion detection or intrusion protection systems*** on sensitive or mission-critical networks and facilities to identify and prevent unauthorized access and exploitation."[16]

Pursuant to the NIPP 2013 and its Annexes, sector-specific agencies,[17] the Commission,[18] and other agencies are charged with ensuring the protection of 16 well-defined critical infrastructure sectors.[19] Throughout these 16 sectors, the relevant agencies have established guidelines (and operators have also voluntarily imposed requirements) for the identification and performance of threat assessments, and for the development, approval, and implementation of security plans for critical infrastructure sites. In some cases, such action has occurred only after an attack demonstrated continued vulnerabilities. For example, in the early morning hours of April 16, 2013, a gunfire attack at Pacific Gas and Electric's Metcalf Substation near San Jose, CA damaged 17 transformers requiring over $15 million in repairs. The attack also impacted

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[14] PPD-21 at 2 (emphasis added).

[15] See National Infrastructure Protection Plan (NIPP) 2013: Partnering for Critical Infrastructure Security and Resilience, United States Department of Homeland Security, p.15 (accessed at https://www.dhs.gov/sites/default/files/publications/national-infrastructure-protection-plan-2013-508.pdf) (the "NIPP 2013") (emphasis added).

[16] Id. at 18.

[17] Id. at 11.

[18] See "Communications Sector-Specific Plan - An Annex to the NIPP 2013", United States Department of Homeland Security (2015) (accessed at: https://www.dhs.gov/sites/default/files/publications/nipp-ssp-communications-2015-508.pdf)

[19] The 16 critical infrastructure sectors defined by the NIPP 2013 are: Chemical; Commercial Facilities; Communications; Critical Manufacturing; Dams; Defense Industrial Base; Emergency Services; Energy; Financial Services; Food and Agriculture; Government Facilities; Healthcare and Public Health; Information Technology; Nuclear Reactors Materials, and Waste; Transportation Systems; Water and Wastewater Systems.

internet, cell, and 911 services in the area. Over 100 spent 7.62x39mm cartridges were later found along with approximately 52,000 gallons of oil which had leaked out of the damaged transformers causing them to overheat.[20] Rep. Henry Waxman, commenting on the incident, concluded "It is clear that the electric grid is not adequately protected from physical or cyber attacks..."[21] Following the Metcalf attack, the Federal Energy Regulatory Commission (FERC) analyzed electrical grid vulnerability and ultimately approved infrastructure protection regulation CIP-014 in November of 2014.[22]

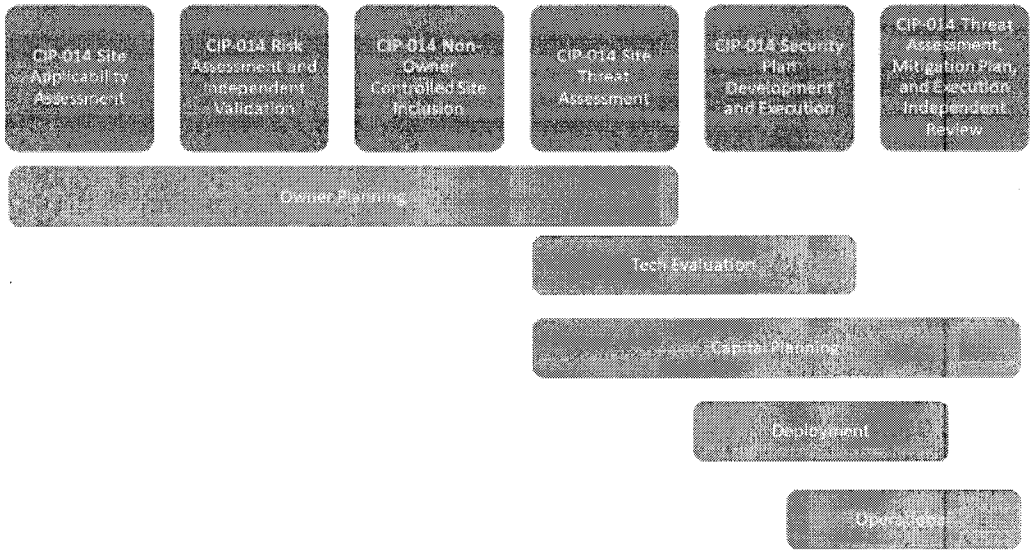
While critical infrastructure operators are subject to various regulatory and voluntary requirements that address the unique infrastructure protection requirements of their sectors, the common requirement for all such operators – regardless of sector – is the need to plan, evaluate and deploy their infrastructure protection plans on a long-term basis, often over a period of 5 years or more. Such complex long-term capital planning necessarily involves evaluating, designing and procuring effective security architecture components, committing to substantial internal infrastructure investments (e.g. fiber optics, power, mounting towers, poles, etc.), finalizing and approving plans, installing and integrating their systems, and obtaining the necessary permits and licenses required for the operation of such systems. For example, in the energy sector, the requirements of the CIP-014 physical security critical infrastructure regulation

[20] "Sniper assault on US power station could have been the rehearsal for an 'even bigger terrorist attack', warns industry expert" Daily Mail.com, February 5, 2014 (accessed at:https://www.dailymail.co.uk/news/article-2552290/Sniper-assault-US-electricity-grid-rehearsal-bigger-terrorist-attack-warns-industry-expert.html)

[21] As quoted in "*'Military-Style' Raid on California Power Station Spooks U.S.*" Foreign Policy. December 27, 2013. Archived from the original on July 5, 2014 (accessed at: https://foreignpolicy.com/2013/12/27/military-style-raid-on-california-power-station-spooks-u-s/)

[22] See *Physical Security Reliability Standard*, Order No. 802, 149 FERC ¶ 61,140, United States Federal Energy Regulatory Commission, Docket No. RM14-15-000 (Issued November 20, 2014) (accessed at: https://www.nerc.com/FilingsOrders/us/FERCOrdersRules/Final%20Rule%20on%20CIP-014-1.pdf).

necessitate years of careful planning and typically comprises steps and milestones similar to the following:



Key among these complicated technical and logistical requirements is the assurance of – for many years in advance during planning and implementation - the unfettered ability to obtain Commission-issued licenses authorizing the operation of state-of-the-art radiolocation technologies for infrastructure surveillance and protection when such licenses are appropriate. While Commission licenses supporting these infrastructure plans may not be applied for and issued until the final installation of the system during the "operational" phase, decisions regarding radiolocation technologies must be made early on in the process and, once selected, such technologies become essential components of the multi-year planning and deployment process for these critical infrastructure protection systems.

B. Commission-Licensed Part 90 Radiolocation Technology Below 3450 MHz Provides Reliable Long-Term Protection of Critical Infrastructure Operations

As an integral part of their long-term infrastructure protection plans, critical infrastructure operators have for years actively licensed and deployed Commission-licensed radiolocation solutions below 3450 MHz for the purpose of infrastructure surveillance and protection.

From a technological perspective, radiolocation solutions within the S band (2-4 GHz) utilize specific propagation and atmospheric conditions unique to this frequency range, which result in fewer multipath propagation problems and fewer effects of clutter from rain, fog, and snow, as compared to higher frequency bands. Dynetics' GroundAware® system, for example, uses these advantages of S Band and provides superior functionality in this frequency range.[23] This system is a Commission-certified state-of-the art all-digital, web-based, low-power, pulsed, non-scanning, ground-based surveillance lower S-Band radar providing real-time situational awareness of property subject to intrusions by humans, vehicles, or animals. The system automates detection, target (intruder) classification, and deterrence of threats, thereby providing substantial efficiencies for large-scale high-risk sector operations that must simultaneously monitor and protect many sites and locations, including sites that are geographically remote where law enforcement response times can be 30 minutes or more. To date, Part 90 Radiolocation Service licenses for GroundAware® products have been issued in over fifty locations,[24] and to Dynetics' knowledge, no ten-year license applications for Part 90 Radiolocation Service operations involving these products been denied or subject to material restrictions.

From a licensing perspective, once a radiolocation solution below 3450 MHz has been chosen as the preferred solution, the long-term duration of Part 90 Radiolocation Service licenses (i.e., 10 years) is necessary in order to allow critical infrastructure applicants to realistically commit the resources necessary to implement their critical infrastructure protection plans. Short-term Special Temporary Authority (STA) does not provide the regulatory and logistical certainty

[23] Both variants of the GroundAware® system can operate on any one of six discrete carrier frequencies spaced 15.625 MHz apart within 3100– 3300 MHz.

[24] See, e.g., WQXB761, WQXF469, WQXM465, WQZH276, WRAG713, WRAV674, WRBP708, WRCC829, WQXF629 WQXN422, WQWZ393 WQXJ432 WQZI582 WRAU277 WRAV708 WRCG718 WRCP841.

that is necessary to plan, commit resources, and deploy infrastructure surveillance and protection on a long-term basis.

C. Prohibiting Part 90 Radiolocation Licensing For New And Modified Operations Below 3450 MHz Prevents Critical Infrastructure Operators From Continuing to Incorporate Such Technology Into Long-Term Infrastructure Protection Plans

Critical infrastructure operators are increasingly committing substantial resources to the deployment of long-term Commission-licensed Radiolocation Service solutions below 3450 MHz, in light of the technical advantages afforded by systems operating in that range. While these long-term Part 90 licenses are usually obtained towards the end of the infrastructure protection compliance process (i.e., when the security technologies become "operational"), the expectation of obtaining such licenses is nonetheless incorporated as an integral part of the infrastructure protection process throughout the early (i.e., corporate planning/tech evaluation) and middle (i.e., capital planning/deployment) compliance stages.

The Energy and Transportation Sectors Have Already Included Part 90-Licensed Radiolocation Below 3450 MHz as an Integral Part of Their Long-term Infrastructure Protection Plans

For several years, Alabama Power Company and Georgia Power Company have been licensing Part 90 radiolocation solutions within 3100-3450 MHz for the purpose of infrastructure surveillance and protection in fulfillment of various regulatory and voluntarily-imposed requirements, for their "operational" (i.e., installed) sites. To date, Alabama Power has been issued 8 licenses by the Commission, authorizing the operation of the Dynetics' GroundAware® system at 35 locations throughout Alabama.[25] Similarly, Georgia Power has been issued 7 licenses by the Commission, authorizing the operation of the Dynetics' GroundAware® system at

[25] See WQXB761, WQXF469, WQXM465, WQZH276, WRAG713, WRAV674, WRBP708, WRCC829.

16 locations.[26] Additional licenses have been issued by the Commission for the surveillance and protection of the Denver International Airport.[27]

Substantial Additional Part 90-Licensed Radiolocation Below 3450 MHz is Currently Being Planned and Implemented for Most Critical Infrastructure Protection Sectors

More specific to this Request, these superior Part 90-licensed solutions within 3100-3450 MHz are being actively pursued for many additional new long-term infrastructure protection deployments throughout the critical infrastructure sectors defined by DHS. For example, it is Dynetics' understanding that at the time of the Commission's implementation of the Freeze, Alabama Power was preparing to file additional Part 90 Radiolocation Service applications for operation below 3450 MHz for the purpose of infrastructure surveillance and protection at additional sites, and its long-term plans included the filing of a number of additional similar applications. In addition, future deployment of Commission-licensed Part 90 Radiolocation Service operations below 3450 MHz is expected to be a key component of critical infrastructure protection across the country, within each of the DHS critical infrastructure sectors. In this regard, Dynetics is currently engaged with 98 entities across the United States - in nearly every one of the 16 DHS sectors - who are either in their early (i.e., corporate planning/tech evaluation) or middle (i.e., capital planning/deployment) stages of their infrastructure protection roll-outs. These critical infrastructure operators are in many cases relying on the ability to promptly obtain long-term Part 90 Radiolocation Service licenses within 3100-3450 MHz once they have reached the appropriate phases of their infrastructure protection programs. Based on Dynetics' work with these entities to date, these critical infrastructure operators are planning to license Part 90

[26] See WQWZ393, WQXJ432, WQZI582, WRAU277, WRAV708, WRCG718, WRCP841.

[27] See WQXF629, WQXN422.

Radiolocation Service products below 3450 MHz for over 250 site locations once they reach the installation or "operational" phase for such sites.

In light of the above, it is clear that substantial resources have already been committed to the deployment of Part 90 Radiolocation Service products for operation within 3100-3300 MHz, and more applications will be filed in the foreseeable future. Despite these ongoing developments – which are in full accord with the NIPP 2013 and related regulatory and industry efforts – the Freeze has – from the very moment of its issuance – completely halted any such further deployment or planning with respect to a technology that provides proven and significant technological advantages. As such, the public interest demands that the Freeze be modified to permit long-term Commission-licensed Part 90 Radiolocation Service solutions below 3450 MHz to continue to be deployed for the purpose of infrastructure surveillance and protection.

III. Request For Modification of Freeze

As discussed above, while months ago it was understandable to assume that NTIA's active consideration of alternative use under the MOBILE NOW Act might remain open to the full 3100-3550 MHz frequency range through the March 2020 report deadline, there is no indication at all that NTIA has identified frequencies for alternative use beyond the limited 3450-3550 MHz frequency range ever since NTIA identified this range in February 2018, and similarly there is no indication at all that NTIA is even actively considering the 3100-3450 MHz range for alternative use at this point for inclusion in the report due in March 2020. Assuming this is indeed the status of NTIA's review, then (i) the 3100-3450 MHz range would not in fact be under "active consideration" by NTIA for possible alternative use; (ii) because the scope of the Freeze would be beyond NTIA's current "active consideration" the Freeze would be unnecessarily restrictive; and (iii) the Freeze should be modified to apply only to the 3450-3550

MHz frequency range because such action would not undermine the policy underlying the Freeze in the first place.

While such action is justified and would not undermine the policies specified in the Freeze Notice, Dynetics recognizes that in certain cases a limited lifting of an application Freeze to permit a specific category of applications may also be appropriate.[28] Accordingly, in the alternative Dynetics requests that the Freeze be lifted to permit applications to be filed exclusively within the more limited range of 3100-3300 MHz by critical infrastructure operators for the purpose of infrastructure surveillance and protection, with such applications restricted to the parameters specified in Dynetics' simultaneously-filed Request for Limited Waiver.[29]

A. The Requested Modification Addresses The Unique Circumstances And Long-Term Deployment Requirements Associated With Critical Infrastructure Protection

As demonstrated above, critical infrastructure operators are subject to unique long-term planning requirements and they must incorporate - early on in such processes – a plan to reliably and consistently deploy Commission-licensed radiolocation facilities using the most effective

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[28] See, e.g., *3650-3700 MHz Government Transfer Band (Extended C-Band),* Memorandum Opinion and Order, ET Docket No. 98-237, FCC 00-181 (2000).

[29] As proposed by Dynetics, such restrictions are: Eligible applicants shall be limited exclusively to operators of facilities within the 16 critical infrastructure sectors defined in the NIPP 2013 and the purpose of the operations must be solely to support infrastructure surveillance and protection; The requested transmissions must originate solely within the property of the owner/operator of such critical infrastructure operations, and must be ground-based operations (not airborne); Such applications must request only discrete carrier frequencies within 3100-3300 MHz and the occupied bandwidth of such emissions must not extend outside such range; Such applications must request authority for no more than 6 discrete carrier frequencies per licensed location; Additional conditions including: The manufacturer of any devices operating under such action must inform purchasers of such devices that such operation is subject to the terms and conditions specified in the Commission's order; Applications seeking authorization pursuant to the Commission's action must reference the Commission's Order by document number, and must demonstrate that the proposed operations fulfill the conditions of the order; Any devices operating under such order must be certified by the Commission, and must comply with the terms of such certification as well as all other technical and operational requirements applicable to Part 90 Radiolocation systems; The manufacturer of any devices operating under such order must notify the Commission of any instances of interference that it is made aware of and how the interference was remedied. Such manufacturer must also create and maintain a record of installations of all devices operating under such order, including the identity of the customer, call signs, type of location, street address and/or coordinates, and equipment model number. This list shall be made available to the Commission and/or to NTIA upon request.

technologies available. In response to such unique requirements, Part 90 licensing of radiolocation facilities below 3450 MHz for the purpose of infrastructure surveillance and protection has been ongoing for several years, and continued additional deployment is planned throughout each of the DHS critical infrastructure sectors, all of which is clearly consistent with homeland security policy and the public interest. Despite these ongoing, diligent efforts, the Freeze immediately thrusted into chaos the long-term licensing and infrastructure protection plans of those critical infrastructure operators who plan to achieve successful infrastructure protection by obtaining authorization for Part 90 Radiolocation Service operations within 3100-3450 MHz.

For example, as explained above, at precisely the moment the Freeze was imposed by the Commission, it is Dynetics' understanding that Alabama Power was preparing to file additional applications for such long-term operations below 3450 MHz, and now such urgently-required deployments are prohibited. In addition, for those nearly 100 critical infrastructure operators who are currently engaged with Dynetics and who are in various phases of their multi-year infrastructure protection compliance programs (and for other operators that will soon be exploring the benefits of 3 GHz radiolocation solutions for infrastructure protection), the Freeze has in a single moment's notice threatened to deny their ability to continue to incorporate such technologies into their plans, and to license such technologies on a long-term basis, as is required to successfully implement such plans.

Non-compliance with express regulatory milestones and infrastructure protection deadlines can result in significant enforcement action and/or penalties to those operators subject to such requirements. Specifically, the EPAct of 2005 granted the Federal Energy Regulatory Commission authority to levy penalties for violations of the Federal Power Act up to $1 million

dollars per violation for each day that the violation continues.[30] As recently as January 2019, a $10M fine was levied against an unidentified utility for violations of critical infrastructure protection standards.[31] More importantly, for all critical infrastructure operators (even those where requirements/sites are self-identified or voluntarily imposed), the inability to readily incorporate licensed Part 90 radiolocation technologies in the lower portion of the 3 GHz band simply renders these entities more vulnerable to intrusion and attack, which places the physical and economic security of the nation at increased risk.

Although these impacts are all certainly unintended, unique and unusual consequences of the Freeze, they are nonetheless very severe and continuing to impose the Freeze in the face of such consequences is plainly contrary to the public interest. Preventing critical infrastructure operators from continued access to these technological advantages, and thereby negatively impacting their ability to seamlessly implement their long-term infrastructure protection plans, is inconsistent with the unambiguous policy of the United States, which confirms that "[p]roactive and coordinated efforts are necessary to strengthen and maintain secure, functioning, and resilient critical infrastructure – including assets, networks, and systems – that are vital to public confidence and the Nation's safety, prosperity, and well-being."[32]

When appropriate in unique circumstances such as the present case, the Commission has taken action to protect the safety and activities of high-risk industrial and critical infrastructure

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[30] See, e.g., "Civil Penalties", Federal Energy Regulatory Commission (accessed at: https://www.ferc.gov/enforcement/civil-penalties.asp - Updated December 3, 2015); *Penalties reach as high as $1 million per day for FERC violations*, Industry Safety and Hygiene News, November 12, 2013 (accessed at: https://www.ishn.com/articles/97315-penalties-reach-as-high-as-1-million-per-day-for-ferc-violations).

[31] *NERC Issues $10M Fine for Security Lapses*, RTO Insider, January 31, 2019 (accessed at:https://www.rtoinsider.com/nerc-fine-cip-110221/).

[32] PPD-21, Introduction.

operators.[33] Indeed, even within the last week, with respect to an Executive Order addressing the protection of information and communications technology and services against foreign entities which in part requires mitigation of transactions that "pose[] an undue risk of catastrophic effects on the security or resiliency of United States critical infrastructure or the digital economy of the United States",[34] Chairman Pai unambiguously confirmed that "[w]hen it comes to our national security, we cannot afford to make risky choices and just hope for the best."[35] Grant of the requested modification of the Freeze as specified in this Request will proactively serve the same national priorities and protect a similar limited class of operators from experiencing significant, albeit unintentional, consequences that continue every day to result from the Freeze.

B. The Requested Modification Will Mitigate The Risk Of Potentially Devastating Impact To Critical Infrastructure Operators Who Must Ensure Reliable And Long-Term Protection Of Their Facilities Using Superior Technologies

Reliable, efficient, cost-effective and long-term protection of critical infrastructure operations is not optional, nor is it subject to postponement, delay or "alternatives." Either such facilities are monitored 24 hours per day / 7 days per week with automated technology that provides real-time situational awareness, or they are at significant increased risk of intrusion/attack and subject to enforcement action or other penalties for non-compliance with

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[33] See e.g., *In the Matter of Flint Hill Resources Pine Bend, LLC - Request for Waiver to License UHF Public Safety Channels in Minnesota*, Order, DA 19-67, WTB (rel. 2/8/2019) (granting waiver to permit operation on Public Safety Pool channels because "[r]eliable communication is essential for critical infrastructure industry entities" like the applicant); *In the Matter of ReconRobotics, Inc., Request for Waiver of Part 90 of the Commission's Rules*, Order, WP Docket No. 08-63, WTB and PS&HSB (rel. February 23, 2010) (granting waiver to permit equipment authorization and customer licensing under Part 90 to support the activities of state and local police and firefighters and security personnel in critical infrastructure industries); *In the Matter of The 4.9 GHz Band Transferred from Federal Government Use*, Order, WT Docket No. 00-32 (rel. August 2, 2004) (granting stay of rules in order to avoid "the unintended consequence of adversely affecting public safety and critical infrastructure operations…")

[34] Executive Order on Securing the Information and Communications Technology and Services Supply Chain, Issued May 15, 2019 (accessed at https://www.whitehouse.gov/presidential-actions/executive-order-securing-information-communications-technology-services-supply-chain/).

[35] Press Release, "Chairman Pai Statement On Executive Order to Protect America's Communications Networks", May 15, 2019.

applicable law. Critical infrastructure operators must identify, very early in the planning process, technologies that can be deployed on a prompt, consistent and long-term basis. Such systems, once identified, become an essential component of the complex long-term planning process that must be employed by any critical infrastructure operator.

Dynetics' GroundAware® system, for example, provides the unique benefit of automated detection, target (intruder) classification, and deterrence of threats, which is a substantial improvement from legacy technologies and one of the reasons for its increasing interest and deployment by critical infrastructure operators. This system provides actionable information, mobile alerts, and integrated intrusion-event live video to owner/operators – all via a single interface without requiring individuals continuously monitor video screens that would significantly increase personnel costs and lead to fatigue resulting in the possibility that some intrusions could be overlooked. Moreover, the radar greatly reduces the number of cameras needed to protect a facility and can detect intruders well beyond the range for most camera systems. With this "rich situational awareness," security stakeholders have the specific real-time information needed to instantaneously respond to threats as they happen in addition to event-logging and radar tracking playback for post-event investigations resulting in a more effective use of limited resources. While attempted security breaches at facilities are not commonly shared, even with vendors, Dynetics is aware that the GroundAware® system has deterred multiple attempted intrusions at electrical substation sites in recent months and was previously used effectively by law enforcement to interdict an intruder, and provide evidence for subsequent prosecution.

The GroundAware® system has proven itself to be reliable and effective not only from a functional standpoint, but also with respect to the ten year Part 90 licensing process. As noted

above, to Dynetics' knowledge, no ten year license applications for Part 90 Radiolocation Service operations involving these products have been denied or subject to material restrictions. These long-term licenses, and the expectation of the critical infrastructure community that such long-term licenses will be readily available, are integral to the long-term infrastructure protection plans of these operators. Although the Commission in its Public Notice permitted the filing of applications for special temporary authority for "short-term" operations,[36] STA is simply not a viable licensing option for critical infrastructure operators who must view infrastructure protection in the long-term.

The Freeze, as currently imposed, completely prohibits additional new long-term licensing of technology that provides the unique benefits of 3 GHz automated web-based detection, classification, and deterrence necessary to ensure long-term infrastructure protection. While certainly this places critical infrastructure at an increased risk of enforcement action, the situation is much more serious because the Freeze subjects critical infrastructure and therefore the security of the nation to an increased risk of attack. The potential consequences, therefore, of maintaining the current scope of the Freeze are well beyond "unduly burdensome." Rather, the consequences could be devastating and involve danger to property, human life, and homeland security. From the moment of its inception, it is clear that the Freeze has placed critical infrastructure operators, and the security of our nation's critical infrastructure, at greater risk with no reasonable alternatives. For this reason, Dynetics seeks expedited modification of the Freeze as requested herein.[37]

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[36] Freeze Notice at 3.

[37] Any limited additional licensing within 3100-3300 MHz that may occur pursuant to the modification requested herein would not have an adverse impact on the spectral environment in that range. For example, the consistent success with respect to prior installation and operation of GroundAware® in over 50 locations to date suggests that actual harmful interference to both federal and non-federal radiolocation systems will not occur, and because the operating (carrier) frequency of these radars can be selected from among six available channels any such operations

IV. Conclusion

For the foregoing reasons, Dynetics hereby requests expedited grant of a modification of the Freeze pursuant to the terms and conditions set forth herein.

Respectfully submitted,

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can flexibly accommodate interoperability with existing co-channel systems or future deployments. Further, the confined deployment (limited to the applicant's property) proposed in this Request will further minimize even the theoretical risk of impact to existing co-channel systems or future deployments. In addition, Dynetics is not aware of any issues or objections that have been raised in connection with any prior applications for licensing of the GroundAware® system, and such systems are, in any event secondary to federal radiolocation operations. 47 C.F.R. § 90.103(c)(12).